

**James H. Lash**  
Director, Site Operations

724-682-7773

July 22, 2005  
L-05-123

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555-0001

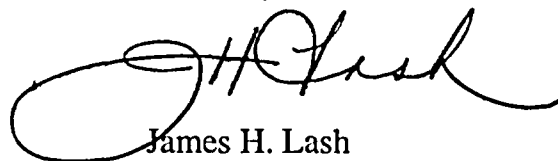
**Subject: Beaver Valley Power Station, Unit Nos. 1 and 2  
BV-1 Docket No. 50-334, License No. DPR-66  
BV-2 Docket No. 50-412, License No. NPF-73  
Response to Request for Additional Information on  
Generic Letter 2004-02 (TAC Nos. MC4665 and MC4666)**

By letter dated March 4, 2005, the FirstEnergy Nuclear Operating Company (FENOC) submitted its initial response to Generic Letter 2004-02 for Beaver Valley Power Station Unit Nos. 1 and 2. By letter dated June 3, 2005, the NRC requested additional information regarding the FENOC response to Generic Letter 2004-02. The FENOC responses to this request are provided in Attachment 1. Attachment 2 provides a list of regulatory commitments made in this submittal.

Should you have any questions or require additional information, please contact Mr. Henry L. Hegrat, Supervisor - Licensing, at (330) 315-6944.

I declare under penalty of perjury that the foregoing is true and correct. Executed on July 22, 2005.

Sincerely,



James H. Lash

Attachments

1. FENOC Response to Request for Additional Information
2. Commitment List

A116

References:

1. Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors," dated September 13, 2004
2. Response (L-05-034) to Generic Letter 2004-02 for Beaver Valley Power Station Unit Nos. 1 and 2, dated March 4, 2005
3. NRC Request for Additional Information Related to Generic Letter 2004-02, dated June 3, 2005

c: Mr. T. G. Colburn, NRR Senior Project Manager  
Mr. P. C. Cataldo, NRC Senior Resident Inspector  
Mr. S. J. Collins, NRC Region I Administrator

FENOC Response to Request for Additional Information  
Regarding Generic Letter 2004-02  
Beaver Valley Power Station

**REQUEST FOR ADDITIONAL INFORMATION**  
**REGARDING GENERIC LETTER 2004-02**  
**“POTENTIAL IMPACT OF DEBRIS BLOCKAGE ON**  
**EMERGENCY SUMP RECIRCULATION AT PRESSURIZED-WATER REACTORS”**  
**FIRSTENERGY NUCLEAR OPERATING COMPANY**  
**BEAVER VALLEY POWER STATION, UNITS 1 AND 2**  
**DOCKET NOS. 50-334 AND 50-412**

By letter dated March 4, 2005, FirstEnergy Nuclear Operating Company (the licensee) provided the 90-day response to U. S. Nuclear Regulatory Commission (NRC) Generic Letter (GL) 2004-02 for Beaver Valley Power Station, Units 1 and 2. The GL requested that addressees perform an evaluation of the emergency core cooling system and containment spray system recirculation functions in light of the information provided in the GL and, if appropriate, take additional actions to ensure system function. Additionally, addressees were requested to submit to the NRC the information specified in the GL. The staff has completed its preliminary review of your response and has determined it needs the following additional information to complete our review:

As a result of the review of the 90-day responses for all licensees and recent discussions with industry, the staff is concerned that some licensees may be delaying the evaluation of chemical and downstream effects until after the September 1, 2005, due date for the next response to the GL. This would result in an incomplete response and is not in accordance with the schedule in the GL. Your 90-day response indicated that your analysis will be completed by September 1, 2005, but did not discuss the evaluation of chemical and downstream effects. Although the GL did not specifically request that the evaluation of chemical and downstream effects be discussed in the 90-day response, please discuss your plans and schedule for evaluating chemical and downstream effects and verify whether your September 1, 2005, response will include an evaluation of these effects.

Response

The NRC and the nuclear industry are examining the impact of chemical interactions on the long-term head loss correlation presently used in containment sump analyses. A test program is currently underway at the Los Alamos National Laboratory (LANL). While no finalized results have yet been published, initial information shows that there are, in fact, long-term chemical effects on the debris bed head loss. The testing is attempting to develop a correlation to permit quantification of these effects. At this time, it is not feasible to quantify the impact of the chemical effects. Since a quantitative assessment is not possible at this time, the September 1, 2005 response for Beaver Valley Power Station will include a qualitative assessment of chemical effects. Additionally, following completion of the LANL testing program, an evaluation of the chemical effects on the debris bed head loss will be performed.

FENOC is doing a downstream effects review in accordance with the guidance of Regulatory Guide 1.82, Rev. 3, "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident", and of Section 7.3 of NEI 04-07, "Pressurized Water Reactor Sump Performance Evaluation Methodology". The Safety Evaluation Report on NEI 04-07 raised additional issues to consider when doing downstream effects analyses. The Westinghouse Owners Group developed WCAP-16406, "Evaluation of Downstream Sump Debris Effects in Support of GSI-191" to describe methods to be used in addressing the downstream effects issues. The WCAP was just published in June 2005. FENOC will do additional evaluations using the guidance provided in the WCAP. However, a vendor with the expertise and availability to do these evaluations has not yet been identified, so the schedule for the evaluations has not yet been defined. The plan for conducting evaluations of the downstream effects of containment sump debris will be discussed in the September 1, 2005 response to Generic Letter 2004-02.

## ATTACHMENT 2 to L-05-123

### Commitment List

The following list identifies those actions committed to by FENOC for Beaver Valley Power Station (BVPS) Unit Nos. 1 and 2 in this document. Any other actions discussed in the submittal represent intended or planned actions by FENOC. They are described only as information and are not regulatory commitments. Please notify Mr. Henry L. Hegrat, Supervisor - Licensing at 330-315-6944 of any questions regarding this document or associated regulatory commitments.

<u>Commitment</u>	<u>Due Date</u>
The September 1, 2005 response to Generic Letter 2004-02 will include a qualitative assessment of chemical effects	September 1, 2005
Perform an evaluation of the chemical effects on the debris bed head loss.	Following completion of the LANL testing program
The plan for conducting evaluations of the downstream effects of containment sump debris will be discussed in the September 1, 2005 response to Generic Letter 2004-02.	September 1, 2005